

What is claimed is:

1. An antibody comprising at least one antibody-antigen binding site, said antibody exhibiting specific binding to human complement component C5, said specific binding being targeted to the alpha chain of human complement component C5, wherein the antibody inhibits complement activation in a human body fluid and does not specifically bind to the human complement activation product free C5a.

2. ~~The antibody of Claim 1 wherein the inhibition of complement activation in the human body fluid is measurable as a substantial increment of blockade of C5a generation and a substantial increment of blockade of complement hemolytic activity in the body fluid, said increment of blockade of C5a generation being substantially equal to said increment of blockade of complement hemolytic activity.~~

3. The antibody of Claim 1 wherein, upon binding to human C5, the antibody substantially inhibits the ability of C5 to bind to human complement component C3.

4. The antibody of Claim 1 wherein, upon binding to human C5, the antibody substantially inhibits the ability of C5 to bind to human complement component C4.

5. The antibody of Claim 1 wherein the antibody binds specifically to an isolated oligopeptide comprising an amino acid sequence corresponding to amino acid 8 through amino acid 12 of SEQ ID NO:1.

6. The antibody of Claim 1 wherein the inhibition of complement activation in the human body fluid is measurable as a substantially complete blockade of C5a generation in the body fluid and a substantially complete blockade of complement hemolytic activity in the body fluid when the antibody is added to the body fluid at a concentration yielding a ratio equal to or less than 10 moles of antibody-antigen binding sites of the antibody to 1 mole of human C5 in the body fluid.

7. The antibody of Claim 1 wherein the antibody is a humanized antibody.

8. The antibody of Claim 1 wherein the antibody is an scFv.

9. A nucleic acid molecule comprising a nucleotide sequence encoding the antibody of Claim 1.

10. A nucleic acid vector comprising a first nucleic acid molecule covalently and operatively linked to a second nucleic acid molecule so that a host containing the vector expresses the polypeptide coded for by the first nucleic acid molecule, wherein the first nucleic acid molecule is the nucleic acid molecule of Claim 9.

11. A recombinant host cell containing the nucleic acid vector of Claim 10.

12. A method for producing an isolated C5 antibody polypeptide comprising growing the recombinant host cell of Claim 11 such that the polypeptide encoded by the nucleotide sequence is expressed by the host cell, and isolating the expressed polypeptide, wherein the expressed polypeptide is an anti-C5 antibody.

13. An isolated oligopeptide comprising an amino acid sequence corresponding to amino acid 8 through amino acid 12 of SEQ ID NO:1.

14. A method of identifying an anti-C5 antibody comprising screening candidate antibodies with the isolated oligopeptide of Claim 13.

15. A method of treating a patient in need of complement inhibition comprising administering the antibody of Claim 1 to the patient in an amount effective to substantially reduce hemolytic activity in a body fluid of the patient.

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F2
add
G3
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K3

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L1